

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY
(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 65679-70613		FOR FURTHER ACTION See Form PCT/IPEA/416	
International application No. PCT/SE 2003/000079	International filing date (day/month/year) 20-01-2003	Priority date (day/month/year) 18-01-2002	
International Patent Classification (IPC) or national classification and IPC G01H 1/00, G07C 3/00, G01M 13/00			
Applicant SPM Instrument AB et al			

<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of <u>5</u> sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input type="checkbox"/> (sent to the applicant and to the International Bureau) a total of _____ sheets, as follows:</p> <p><input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>																									
<p>4. This report contains indications relating to the following items:</p> <table> <tr> <td><input checked="" type="checkbox"/></td> <td>Box No. I</td> <td>Basis of the report</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. II</td> <td>Priority</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. III</td> <td>Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. IV</td> <td>Lack of unity of invention</td> </tr> <tr> <td><input checked="" type="checkbox"/></td> <td>Box No. V</td> <td>Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. VI</td> <td>Certain documents cited</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. VII</td> <td>Certain defects in the international application</td> </tr> <tr> <td><input checked="" type="checkbox"/></td> <td>Box No. VIII</td> <td>Certain observations on the international application</td> </tr> </table>		<input checked="" type="checkbox"/>	Box No. I	Basis of the report	<input type="checkbox"/>	Box No. II	Priority	<input type="checkbox"/>	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability	<input type="checkbox"/>	Box No. IV	Lack of unity of invention	<input checked="" type="checkbox"/>	Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement	<input type="checkbox"/>	Box No. VI	Certain documents cited	<input type="checkbox"/>	Box No. VII	Certain defects in the international application	<input checked="" type="checkbox"/>	Box No. VIII	Certain observations on the international application
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Date of submission of the demand 01-08-2003	Date of completion of this report 09-03-2004
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Box No. I Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ This report is based on a translation from the original language into the following language _____, which is the language of a translation furnished for the purposes of:

- ☐ international search (under Rules 12.3 and 23.1(b))
☐ publication of the international application (under Rule 12.4)
☐ international preliminary examination (under Rules 55.2 and/or 55.3)

2. With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

☒ the international application as originally filed/furnished

☐ the description:

pages _____ as originally filed/furnished

pages* _____ received by this Authority on _____

pages* _____ received by this Authority on _____

☐ the claims:

pages _____ as originally filed/furnished

pages* _____ as amended (together with any statement) under Article 19

pages* _____ received by this Authority on _____

pages* _____ received by this Authority on _____

☐ the drawings:

pages _____ as originally filed/furnished

pages* _____ received by this Authority on _____

pages* _____ received by this Authority on _____

☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.

3. ☐ The amendments have resulted in the cancellation of:

☐ the description, pages _____

☐ the claims, Nos. _____

☐ the drawings, sheets/figs _____

☐ the sequence listing (*specify*): _____

☐ any table(s) related to the sequence listing (*specify*): _____

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

☐ the description, pages _____

☐ the claims, Nos. _____

☐ the drawings, sheets/figs _____

☐ the sequence listing (*specify*): _____

☐ any table(s) related to the sequence listing (*specify*): _____

* If item 4 applies, some or all of those sheets may be marked "superseded."

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**1. Statement**

Novelty (N)	Claims	<u>4-7, 9-44</u>	YES
	Claims	<u>1-3, 8</u>	NO
Inventive step (IS)	Claims		YES
	Claims	<u>4-7, 9-44</u>	NO
Industrial applicability (IA)	Claims	<u>1-44</u>	YES
	Claims		NO

2. Citations and explanations (Rule 70.7)**Documents cited in the International Search Report:**

WO 0114835

US 6324487

WO 9801831

US 6078874

EP 0905601

WO 01/14835 describes an apparatus for analysing the condition of a machine having a rotating shaft. Data from a sensor, dependent on rotation of the shaft is measured and evaluated. Data processing means performs a plurality of condition monitoring functions (vibration magnitude, vibration phasor angle). Said data processing means includes a Field Programmable Gate Array circuit (40) coupled to at least one input from the sensor. An apparatus as defined in claims 1 and 8 lack novelty.

Said data processing means comprises at least two data processing devices cooperating so as to control operation of said condition analysis apparatus. A first one being the Field Programmable Gate Array Circuit (40) and a second one of said data processing devices is a microprocessor (not shown, see page 7, lines 21-30) to control the operation of the Field Programmable Gate Array circuit. Claims 2-3 lack novelty.

US 6324487 also describes an apparatus for analysing the condition of a machine having a rotating shaft and a sensor. The apparatus comprising data processing means with a Field Programmable Gate Array (FPGA), see column 8, lines 26-44).

.../...

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

Continuation of: BOX V

Accordingly, claim 1 lack novelty also in view of US 6324487.

WO 01/14835 also comprising necessary memory segments or registers in order to execute the condition monitoring function. Claims 4-7 therefore are considered not to involve an inventive step.

Claim 31 differs from what is known from the apparatuses mentioned in WO 01/14835 or US 6324487 in that the use is registered in a logger.

A person skilled in the art learns from EP 0905601 to register the use of a condition measuring apparatus in a logger.

Thus, for a person skilled in the art facing this problem it must be obvious to modify any of the apparatuses mentioned in WO 01/14835 or US 6324487 in order to register the use in a logger and since no unexpected effect is obtained claim 31 is considered not involve an inventive step.

In view of the cited documents, remaining claims, mainly relating to signal processing of measured parameters such as shock pulse, temperature and information about the size and volume of the apparatus comprises only obvious features and can not be considered to involve an inventive step.

Accordingly, claims 1-3 and 8 lack novelty. Claims 4-7 and 9-44 are considered novel but do not involve an inventive step. The claimed invention is industrially applicable.

Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

Claim 3 ought to be connected to claim 2, not to claim 1, since two data processing devices is mentioned in claim 2.

Claim 40 ought to be connected only to claim 31 since "said logger" is mentioned in claim 31.

Claim 43 ought to be connected to claim 40.

Claim 44 ought to be connected to claim 40.